

## Remarks

**Amendments**

Claims 9 through 16 are pending in this application.

**Claim amendments and interpretation**

Claim 16 has been amended by inserting the phrase "*before integrating as an active network node*," to remove an inconsistency between claim 16 and claims 9 and 15.

In order to ensure mutual understanding, it is observed that the generally accepted meaning of the term 'detecting', as recited in the claims, means "to determine the existence or presence of", i.e. to determine whether or not something is present. In this respect, it is observed that detecting activity can only yield one of two possible results: either activity has been found or no activity has been found. Claims 9, 15 and 16 specify what happens in either case, as follows from the phrases: "*in case no activity is detected*" and "*in case activity is detected*" and the subsequent recitations. Clearly, any prior art that does not disclose a 'detecting' step cannot disclose what happens in response to such a 'detecting' step.

**Claim rejections -35 USC 103(a)**

Claims 9 and 12, 15 and 16 stand rejected under 35 USC 103(a) as being unpatentable over Zinke (US Patent Application Publication 2005/0094674) in view of Woest (US patent 5444851). Claims 10, 13 and 14 stand rejected under 35 USC 103(a) as being unpatentable over Zinke (US Patent Application Publication 2005/0094674) in view of Woest (US patent 5444851) and further in

view of Taylor (US patent 7035246). Claim 11 stands rejected under 35 USC 103(a) as being unpatentable over Zinke (US Patent Application Publication 2005/0094674) in view of Woest (US patent 5444851) and further in view of Taylor (US patent 7035246) and Williams (US patent 6185247).

These rejections are respectfully traversed for the following reasons.

***Claim 9***

It is submitted that one of ordinary skill in the art could not have arrived at the subject matter recited in claim 9 in an obvious manner. In particular, claim 9 recites features not disclosed in either of Zinke or Woest. For that reason alone, one of ordinary skill in the art could not have combined the teachings of Zinke and Woest to arrive at a network system with the features recited in claim 9. Moreover, as is explained in more detail below, neither Zinke nor Woest disclose "*said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*" as recited in claim 9. Furthermore, Woest does not teach the feature of "*(...) in case no activity is detected, to assign itself as said reference network node and to transmit position messages predetermined in a communication schedule to other network nodes*", as also recited in claim 9.

It is observed that it has already been acknowledged in the Office Action that Zinke does not disclose this latter feature.

In addition, Woest does not disclose the feature of "*(...) each network node is adapted to select, in case activity is detected, a network node from which a position message is received as said*

*reference network node and to adjust its local communication time schedule to said reference node communication time schedule" as recited in claim 9.*

It is observed that it has already been acknowledged in the Office Action that Zinke does not disclose this feature.

Furthermore, Woest does not teach the feature of "*wherein each network node is adapted to integrate as an active network node in case of a positive result of an agreement check between said local communication time schedule and communication time schedules of at least a part of active network nodes*" as recited in claim 9.

It is observed that it has already been acknowledged in the Office Action that Zinke does not disclose this feature.

Since the combination of Zinke and Woest does not, and in fact cannot, disclose each and every feature of claim 9, claim 9 could not have been obvious to one skilled in the art at the time of making the invention in view of the combination of Zinke and Woest.

Detailed discussion of these points follows.

#### Disclosure of Zinke

In the Office Action, it has been asserted that §0014 of Zinke discloses the feature of "*said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*". However, this paragraph merely states that a "*(...) comparison of the activities with the predefined communication time schedule*" is performed. This paragraph of Zinke discloses neither the sub-features (...), *before integration as an active network*

*node, (...)” nor “said network nodes each being adapted to detect (...) activity of other network nodes” as recited in claim 9. In fact, §0014 of Zinke is completely silent on what entity performs the “(...) comparison of the activities with the predefined communication time schedule”. Accordingly, this paragraph, even when taken alone and out of context of the overall disclosure of Zinke, does not teach the feature of “(...), before integration as an active network node, (...)” as recited in claim 9.*

On the contrary, when read in context with the overall disclosure of Zinke, the step of §0014 is apparently performed by the bus monitor when already integrated. As follows from §0009, the step of §0014 is part of a method performed after initialization of the bus monitor and synchronization of the bus monitor with the time schedule, and therefore after integration (see e.g. Zinke §0011 and §0012). In fact, the bus monitor has to be already integrated to control access of the communications nodes based on the predefined communication time schedule: e.g. access for a node is blocked if a behavior not compatible with the predefined communication time schedule has been detected (see § 0016). If the bus monitor is not already integrated, the bus monitor cannot be synchronized to the communication time schedule that is used by the communication system and therefore cannot use the communication time schedule to control access. Accordingly, the bus monitor must be previously integrated.

The Examiner is referred to §0026 of Zinke which explicitly states that, during initialization, the “(...) bus monitor must remain deactivated”, i.e. until it is synchronized with the communication schedule. Thus, the bus monitor does not start control of the communication in accordance with the predetermine schedule until

after the synchronization (see §0026 last sentence). Accordingly, the bus monitor must already be integrated. Accordingly, Zinke teaches a bus monitor which is already integrated and does not disclose the feature of "*(...) before integration as an active network node (...)*" as recited in claim 9.

Furthermore, Zinke does not teach that the bus monitor detects whether or not there is any activity of other network nodes. §0014 states that a "*(...) comparison of the activities with the predefined communication time schedule*" is performed. However, a comparison is not a detection and accordingly §0014 alone neither discloses nor implies the feature of "*said network nodes each being adapted to detect, (...) activity of other network nodes*" as recited in claim 9.

Nor do other parts of Zinke imply or disclose the feature of "*said network nodes each being adapted to detect (...) activity of other network nodes*" as recited in claim 9. In the paragraphs before and after §0014, Zinke states that a bus monitor monitors the 'activities'. However, the meaning of the term "activities" as used in Zinke differs from the ordinary meaning, since Zinke explicitly defines the term 'activities' as meaning 'state transitions from inactive to active and vice versa' (see Zinke §0017, first sentence). Accordingly, Zinke teaches that the bus monitor monitors the state transitions – i.e. observes the evolution thereof in time - and compares the observed evolution of the state transitions with the predetermined communication schedule. Thus, the bus monitor monitors whether or not an observed pattern of state transitions corresponds to the predefined communication schedule, and does not check whether or not there is activity. Furthermore, the bus monitor does not make a decision based on whether or not there is activity rather on a comparison between an observed pattern and the predetermined

communication schedule. Any decision taken is therefore not based on whether or not there is activity but on the result of the comparison, i.e. on whether the observed pattern matches the predefined communication schedule. It should be apparent, that whether or not there is activity is not dependent on whether or not the observed pattern matches the predefined communication schedule. Accordingly Zinke does not teach the feature of "*said network nodes each being adapted to detect (...) activity of other network nodes*" and therefore Zinke fails to disclose the feature of "*said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*", as recited in claim 9.

#### Detailed discussion of the Woest Disclosure

Woest teaches a method of accessing configured nodes in a facilities management system with a non-configured device. Woest discloses that a node amongst nodes connected on a bus is defined as a system time manager (see column 46 II. 11-37). The system time manager defines the time and transmits time information to the other nodes. When a node has not received time synchronization data in time, it determines whether it can be the system time manager and if so transmits the time. Thus, Woest discloses a method of how a node can take over a role as system time manager. However, Woest does not teach a feature corresponding to "*said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*" as recited in claim 9.

Moreover, in the situation described in Woest at column 46 II. 11-37, the network node is already integrated and only takes over the role of system time manager when the information from the designated

system time manager is not received in time. To take over the role of a system time manager, a node has to be visible to the network. As follows from e.g. column 21 ll. 23-34 non-integrated devices (referred to in Woest as 'non-configured device') can be in contact with the network by being attached to a node but are not visible to the network (see e.g. column 21 ll. 34-35) and therefore do not form part of the network.

Furthermore, to determine whether or not the information from the designated system time manager is received in time requires that the node has obtained knowledge about the timing schedule and the time of the network, and therefore that the node is integrated in the network. Thus, all nodes are necessarily integrated in the network and Woest does not disclose "*(...) said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*" as recited in claim 9.

Woest only discloses determination of whether or not the time synchronization data is received in time. The transmission of time synchronization data is not related to whether or not there is other activity of the other nodes. For example, when the system time manager does not send the time synchronization data in time, there can still be activity from other nodes because these are sending data back and forth. Thus, determining whether or not the time synchronization data is received in time is not the same as a detection of whether or not there is any activity of other network nodes. Accordingly, Woest does not disclose "*(...) said network nodes each being adapted to detect, before integration as an active network node, activity of other network nodes*" as recited in claim 9

Since Woest does not disclose "*network nodes adapted to detect(...)* *activity of other network nodes*", it is logically impossible for Woest to disclose how network nodes respond to not detecting any activity of other network nodes. Woest discloses that a node can assign itself as a system time manager if the time synchronization data is not received in time. However, as mentioned above, this does not exclude the presence of other activity, i.e. other data than time synchronization data could be sent. Accordingly, Woest does not disclose what happens when no activity is detected. Nor does Woest disclose that a node assigns itself as system time manager when there is no activity.

Furthermore, Woest discloses that the node, when assigned system time manager, sends the time synchronization data (c. 26-28). However, Woest does not disclose that the node transmits position messages predetermined in a communication schedule. Thus, Woest does not teach the features of "*(...) in case no activity is detected, to assign itself as said reference network node and to transmit position messages predetermined in a communication schedule to other network nodes*". Since Woest does not disclose network nodes adapted to detect activity of other network nodes, Woest logically cannot disclose how network nodes respond to detecting any activity of other network nodes. Thus, Woest cannot disclose the feature of : "*(...) each network node is adapted to select, in case activity is detected, a network node from which a position message is received as said reference network node and to adjust its local communication time schedule to said reference node communication time schedule*" as recited in claim 9.

Moreover, Woest discloses that a system manager is selected before the time monitoring is started (see c. 46 l. 14-15 and ref. nr 27-1 in

Fig. 27). However, Woest is completely silent on how and by what entity the selection is performed. Woest further discloses that if the time synchronization data is received in time, the time monitoring continues and, as shown in Fig. 27 with the arrow from 27-8 to 27-2, the selection is not performed again. Thus, Woest does not disclose a selection of the system manager when the synchronization data is received in time and does not disclose that the "*network node is adapted to select, in case activity is detected, a network node (...) as said reference network node*" as recited in claim 9.

Woest discloses that the node adjusts its local communication time schedule to the time indicated in the time synchronization data. However, the time synchronization data only indicates the time (see c. 46 l. 16) and does not indicate the position of the system managers information in a communication schedule. Thus, Woest does not disclose the transmission of position messages and accordingly does not disclose the feature of "*(...) a network node from which a position message is received (...)*" as recited in claim 9. As follows from the above, Woest does not disclose the feature of "*(...) each network node is adapted to select, in case activity is detected, a network node from which a position message is received as said reference network node and to adjust its local communication time schedule to said reference node communication time schedule*" as recited in claim 9.

Since the nodes are already integrated. Woest cannot disclose the feature of "*wherein each network node is adapted to integrate as an active network node in case of a positive result of an agreement check between said local communication time schedule and communication time schedules of at least a part of active network nodes*" as recited in claim 9. Woest discloses that the node simply

resets its time if the time synchronization data is received in time (see c. 46 l. 31-32). Woest therefore does not disclose that the node checks whether or not its time agrees with the time indicated by the time synchronization data. Furthermore, Woest does not disclose that the node has a local communication time schedule and does not disclose that the nodes makes an agreement check between a local communication time schedule and communication time schedules of at least a part of active network nodes, or what happens when . Accordingly, Woest does not disclose the feature of "*wherein each network node is adapted to integrate as an active network node in case of a positive result of an agreement check between said local communication time schedule and communication time schedules of at least a part of active network nodes*" as recited in claim 9.

Claim 9 therefore recites features not disclosed in either of Zinke or Woest. For that reason, one with ordinary skill in the art could not have combined the teachings of Zinke and Woest to arrive at a network system with the features recited in claim 9.

### **Claims 10-16**

Claims 10-16 are either dependent on claim 9 or recite features similar to the features of claim 9, which are not disclosed by either Zinke or Woest. Accordingly, one of ordinary skill in the art could not have arrived at the subject matter recited in claims 10-16 in an obvious manner.

As follows from the above, the amended independent claims of record are non-obvious over any combination of Zinke, Woest, Taylor and Williams. The applicant submits that this application

therefore satisfies the requirements for patenting in the United States. Passage to issuance is respectfully requested.

No new matter has been added in this amendment.

Respectfully submitted,

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